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SEAGER, TUFTE & WICKHEM, LLC
1221 NICOLLET AVENUE
SUITE 800
MINNEAPOLIS, MN 55403-2420

EXAMINER	
MILLER, DANIEL	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/599,231	FARRELLY ET AL.	
	Examiner	Art Unit	
	DANIEL MILLER	2858	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 September 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 September 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/22/2006, 9/25/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on PCT/IE2004/000046 filed March 26, 2004.

Information Disclosure Statement

2. The information disclosure statements submitted on September 22, 2006 and September 25, 2006 were filed before the mailing date of a first Office action on the merits. The submissions are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Drawings

3. The drawings are objected to because in Figs. 4, 7, 11, 14 and 15 all numbers, letters, and reference characters do not measure at least 0.32 cm. (1/8 inch) in height as required by 37 CFR 1.84(p)(3). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must

be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Status of the Claims

4. Original claims 1-20 form the basis of the present examination.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 5 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites "at least one package" and claim 16 recites "at least one optical disk package". It is unclear, however, if these packages are the same or different than the packages recited in claim 1 from which claims 5 and 16 depend. Claims 5 and 16

therefore fail to interrelate essential components of the invention, and, therefore, fail to point out and distinctly claim the invention. See MPEP 2172.01.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant admitted prior art at page 2, lines 18-29, page 3, lines 1-21, page 21, lines 20-26 and page 23, lines 18-21 of the specification as filed (AAPA) in view of applicant-cited European Patent Publication 1164380 to Kohler (Kohler) discussed in AAPA, and further in view of DDC Online, Chapter 2: Control Response (DDC), available online at http://web.archive.org/web/20021021221037/http://www.ddc-online.org/intro/intro_chapt02.html on October 21, 2002, and US Patent No. 3,327,207 to Norwich (Norwich).

Regarding claim 1, AAPA in view of Kohler discloses:

a capacitor sensing inspection system, the system comprising a pair of capacitors, the first capacitor in use having a reference package as a dielectric, the second capacitor in use having a package to be measured as a dielectric, the system having a measurement circuit for providing a first indication when the capacitance of the first capacitor is substantially greater than the capacitance of

the second capacitor and a second indication when the capacitance of the first capacitor is substantially less than the capacitance of the second capacitor, the first and second indications being indicative of differences between the reference package and the package to be measured and wherein the system further comprises a potentiometer having a variable position for adjusting a balance point of the measurement circuit so as to equalise a response between the first and second indications (inspection system as described in AAPA, page 3, lines 1-18, with reference to Kohler).

AAPA in view of Kohler does not appear to explicitly disclose that ***the capacitor system further comprises an auto-balancer for controlling the balance point, wherein upon activation of the auto-balancer, the potentiometer is adapted to be moved into a first position where a first indication is received from the measurement circuit and into a second position where a second indication is received from the measurement circuit, the auto-balancer being then adapted to move the potentiometer position into a position substantially midway between said first and second positions so as to automatically provide a balance point for the measurement circuit***.

The manual adjustment of a balance point of a measurement circuit to provide an equalized response is well-known in the art. With reference to page 2, Fig. 4 of DDC, for example, the operating point (setpoint) can be selected to be at the midpoint of the deadband, or neutral zone. One of ordinary skill in the art at the time the invention was made would understand that selecting the operating point in this manner increases the

stability of the output, especially in cases where the measured signal exhibits significant noise or other variation. It would further have been understood by one of ordinary skill in the art at the time the invention was made that locating the operating point at the midpoint of the deadband would merely require identifying the operating value endpoints at which a control response is produced (e.g., values 1.4 and 1.6 in Fig. 4 of DDC) and then setting the operating point midway between those endpoints. In the same way, the operating point of the inspection system of AAPA in view of Kohler can be adjusted using a potentiometer, such as, for example, potentiometer 14 shown in Fig. 1 of Kohler. Accordingly, AAPA in view of Kohler and further in view of DDC discloses the process of moving the potentiometer into a first position where a first indication is received from the measurement circuit and into a second position where a second indication is received from the measurement circuit, and then moving the potentiometer position into a position substantially midway between said first and second positions so as to automatically provide a balance point for the measurement circuit.

AAPA in view of Kohler and further in view of DDC does not appear to explicitly disclose that this process is implemented by an auto-balancer, which is construed to mean a device for automatically manipulating the potentiometer to perform the balancing process. However, providing an automatic or mechanical means to replace a manual activity (e.g., manually adjusting a potentiometer in the manner disclosed by AAPA in view of Kohler and further in view of DDC) which accomplishes the same result is not sufficient to distinguish over the prior art. See MPEP 2144.04 (citing *In re Venner*,

262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958)). Moreover, it is noted that servos intended for automating potentiometer operation are well-known in the art. See, e.g., single figure of Norwich, servo motor 59 controls potentiometer 65.

Regarding claim 3, AAPA in view of Kohler, DDC and Norwich discloses ***wherein the auto-balancer comprises a motor coupled to the potentiometer for moving the potentiometer between the first and second positions*** (Norwich, servo motor 59 controls potentiometer 65, as discussed above in connection with claim 1).

Regarding claim 4, AAPA in view of Kohler, DDC and Norwich discloses ***an optical disc inspection system, comprising the capacitor sensing system of claim 1*** (Kohler, paragraph [0026], testing for the presence of a compact disc (CD)).

9. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Kohler, DDC and Norwich, or alternatively, over AAPA in view of Kohler, DDC and Norwich and further in view of US Patent No. 4,914,377 to Russell (Russell).

Regarding claim 2, AAPA in view of Kohler, DDC and Norwich does not appear to explicitly disclose ***wherein the activation of the auto-balancer is by means of a user operable switch***. However, use of user-operable switches for enabling user control of electrical or mechanical components is well-known. For example, one of ordinary skill in the art would understand that in the servo motor/potentiometer control arrangement disclosed by Norwich, it would have been obvious to provide an electrical

switch for powering the system depicted in the figure on and off, thus controlling the activation of the servo motor 59 at least indirectly.

Alternatively, it is well-known in the art that switches can be used to initiate processes (e.g., calibration) for balancing circuits. See, e.g., Russell, Fig. 1D and col. 14, lines 40-61. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify AAPA in view of Kohler, DDC and Norwich to include a user-operable switch in the manner disclosed by Russell to activate the auto-balancer for at least the reason that this would permit selective activation of the auto-balancer by a user on an as-needed basis.

10. Claims 5-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Kohler, DDC and Norwich, and further in view of US Patent No. 6,434,264 to Asar (Asar).

Regarding claim 5, AAPA in view of Kohler, DDC and Norwich discloses ***a transport mechanism for moving at least one package from a start point towards an end point*** (AAPA, page 3, lines 1-21, conveyor mechanism), and ***a control system responsive to a user input to place said inspection system in a teach mode*** (AAPA, page 21, lines 20-26, turning the transport mechanism off (which inherently requires the use of a switch or other user-operated control system) into order to teach the inspection system a new package).

Asar also discloses ***a control system responsive to a user input to place said inspection system in a teach mode***. For example, Asar discloses that its inspection

control system is responsive to user input place the inspection system in a teach mode (Asar, col. 17, line 51 to col. 18, line 5, capture of a new Golden Board file by placement of the Golden Board onto the conveyor 50 by an administrator and the capture of the Golden Board image; col. 25, lines 5-18, at any time during the comparison inspection process, the user can input standard defect data for collection in a database by tagging the test board image; col. 26, lines 36-56, allowing the current test board to be upgraded to Golden Board as a replacement based on user menu selections). Accordingly, even if AAPA in view of Kohler, DDC and Norwich would not be understood as disclosing this feature, it would have been obvious to one of ordinary skill in the art to modify AAPA in view of Kohler, DDC and Norwich to include this feature as disclosed by Asar for at least the reason that this would mitigate or avoid known problems associated with conventional teaching processes as recognized by AAPA at page 21, lines 20-26 (turning the transport mechanism off by the operator, manual positioning of the item to be inspected and associated positioning error).

AAPA in view of Kohler, DDC and Norwich discloses wherein an operator ***prevents the progress of items along the conveyor belt from the start point to the end point*** (AAPA, page 21, lines 20-26, during the teach mode, the operator switches the transport mechanism off). AAPA in view of Kohler, DDC and Norwich does not appear to explicitly disclose ***a stop movable between an inactivate position and an activate position***, and that it is the ***activate position*** of the stop that prevents the progress of items along the conveyor belt from the start point to the end point. Asar discloses a vision comparison inspection system (Asar, Fig. 4) having a stop movable

between an inactivate position and an activate position (Asar, Fig. 4 and col. 13, lines 14-39, cylindrical shaft 166 that is retractable and extendable in the direction of the double-headed arrow labeled "C" in FIG. 4), wherein the cylindrical shaft 166, when in the extended position, prevents the progress of items along the conveyor belt from the start point to the end point. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify AAPA in view of Kohler, DDC and Norwich to include a stop as disclosed by Asar that prevents the progress of items along the conveyor belt from the start point to the end point for at least the reason that this would provide a reference surface for engaging an item so that it can be positioned for inspection (Asar, col. 4, line 60 to col. 5, line 14).

AAPA in view of Kohler, DDC and Norwich does not appear to explicitly disclose ***wherein upon receipt of the user input, the control system activates the stop and upon the exiting of the inspection system from the teach mode causes the stop to move to the inactive position***. Asar further discloses that the upon receipt of the user input the control system activates the stop and upon the exiting of the inspection system from the teach mode causes the stop to move to the inactive position (Asar, col. 26, lines 36-56, as noted above, Asar discloses that the current test board can be upgraded to Golden Board as a replacement based on user menu selections; accordingly the Golden Board can be obtained from a test board during the ordinary course of processing when the cylindrical shaft 166 of Asar is activated by the control system to position and release the test boards responsive to user input). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify

AAPA in view of Kohler, DDC and Norwich such that the control system activates the stop and upon the exiting of the inspection system from the teach mode causes the stop to move to the inactive position responsive to the receipt of user input as further disclosed by Asar. In this way, by automating the teaching process, known problems associated with conventional teaching processes as recognized by AAPA at page 21, lines 20-26 (turning the transport mechanism off by the operator, manual positioning of the item to be inspected and associated positioning error) can be mitigated or altogether avoided.

Regarding claim 6, AAPA in view of Kohler, DDC, Norwich and Asar discloses ***wherein the control system is adapted to stop the transport mechanism in response to the user input*** (AAPA, page 21, lines 20-26, turning the transport mechanism off (which inherently requires the use of a switch or other user-operated control system) into order to teach the inspection system a new package).

Regarding claim 7, AAPA in view of Kohler, DDC and Norwich and Asar as applied to claim 6 does not appear to explicitly disclose ***wherein the control system is adapted to apply a delay between activating the stop and before stopping the transport mechanism***. However, Asar further discloses a control system that is adapted to apply a delay between activating the stop and before stopping the transport mechanism (Asar, col. 13, lines 40-65, a timer in the controller 80 stops the conveyor motor 122 within seconds after the leading edge of the test board 54 engages the stop

cylinder shaft 166). It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify AAPA in view of Kohler, DDC and Norwich and Asar as applied to claim 6 such that the control system is adapted to apply a delay between activating the stop and before stopping the transport mechanism as disclosed by Asar for at least the reason that this would ensure that the inspected item is retained against the reference surface provided by stop.

Regarding claim 8, AAPA in view of Kohler, DDC and Norwich and Asar discloses ***wherein the transport mechanism comprises a conveyor belt system*** (AAPA, page 23, lines 18-21, transport mechanisms in prior art systems include conveyor belts).

Regarding claim 9, AAPA in view of Kohler, DDC and Norwich and Asar as applied to claim 8 does not appear to explicitly disclose ***wherein said conveyor belt system is a twin belt conveyor***. However, Asar further discloses a conveyor belt system that includes a twin belt conveyor (Asar, Fig. 3 and col. 12, lines 9-18, pair of parallel conveyor belts 110 and 112). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify AAPA in view of Kohler, DDC and Norwich and Asar as applied to claim 8 such that the conveyor belt system is a twin belt conveyor for at least the reason that a twin belt arrangement permits sensing from beneath the inspected item (e.g., by optical sensor 164 of Asar) as it is conveyed.

Regarding claim 10, AAPA in view of Kohler, DDC and Norwich and Asar discloses ***wherein axis of motion of the stop is substantially perpendicular to the direction of travel of the conveyor*** (Asar, Fig. 4 and col. 13, lines 14-39, cylindrical shaft 166 is retractable and extendable in the direction of the double-headed arrow labeled "C", which is substantially perpendicular to the indicated flow direction).

Regarding claim 11, AAPA in view of Kohler, DDC and Norwich and Asar discloses ***wherein in the inactivate position, the stop rests below and between the belts of the conveyor system*** (Asar, in Fig. 5 (which is a sectional view of Fig. 4 along line 5-5), the stop cylinder unit 160 (which contains the cylindrical shaft 166) is between the conveyor belts 110, 112 (as indicated by the positions of rail members 118, 120); additionally, it is clear in Asar's system that the cylindrical shaft 166 must rest below the belts of the conveyor system in the retracted (e.g., inactivate) position, versus the extended (e.g., activate) position shown in Fig. 4 in which the cylindrical shaft 166 is interposed between the conveyor belts to stop an inspected item).

Regarding claim 12, AAPA in view of Kohler, DDC and Norwich and Asar discloses ***wherein the first capacitor is positioned remotely from said transport mechanism*** (AAPA, page 3, lines 1-18, in known three-plate twin capacitor systems, packages to be tested are positioned between the plates of a measurement capacitor by a conveyor mechanism (the claimed "transport mechanism"), while a good product against which a comparison of the tested packages is to be made is placed between the

plates of a reference capacitor (the claimed "first capacitor"); in AAPA, only the measurement capacitor is accessible by the conveyor mechanism; the reference capacitor is not positioned to be accessed by the conveyor mechanism; therefore, the reference capacitor is inaccessible to (e.g., positioned remotely from) the conveyor mechanism.

11. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Kohler, DDC, Norwich and Asar, and further in view of US Patent No. 4,193,116 to Funk (Funk).

Regarding claim 13, AAPA in view of Kohler, DDC, Norwich and Asar does not appear to explicitly disclose ***wherein the first capacitor is located in a control panel enclosure of the inspection system***. It is well-known that, in applications in which a material is to be evaluated based on measured dielectric properties between capacitor plates, the capacitor plates may be contained in a control panel. See, e.g., Funk, Fig. 3, housing 22 in which capacitor plates 42, 44 are contained). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify AAPA in view of Kohler, DDC, Norwich and Asar such that the first capacitor is located in a control panel enclosure as disclosed by Funk for at least the reason that this would provide a structure to which the capacitor plates could be attached in order to define a test region therebetween, and to generally protect the capacitor and its associated circuitry.

Regarding claim 14, AAPA in view of Kohler, DDC, Norwich, Asar and Funk disclose ***wherein an opening is provided in said control panel enclosure defining a slot for receiving the reference package*** (Funk, Fig. 3, opening provided at the top 54 of a test cell 40 defines a slot for receiving a volume of test material, the opening is in (e.g., contained in) the housing 22) ***and wherein a first plate of the first capacitor is disposed on one side of the slot*** (capacitor plate 42) ***and the second plate of the capacitor is disposed on the opposing side of the slot*** (capacitor plate 44).

Regarding claim 15, AAPA in view of Kohler, DDC, Norwich, Asar and Funk disclose ***wherein the control panel enclosure includes an actuator for ejecting a reference package through the slot opening*** (Funk, col. 9, lines 7-17, activation of motor control 168 via line 170 for rotating the motor 122 via line 166 to unload or remove the material from the test cell). It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify AAPA in view of Kohler, DDC, Norwich, Asar and Funk as applied to claim 14 such that the control panel enclosure includes an actuator for ejecting a reference package through the slot opening as disclosed by Funk for at least the reason that this would mitigate or avoid the time consuming manual positioning of the reference package which, as explained in AAPA at page 21, lines 20-26, is a known disadvantage of conventional package inspection systems.

12. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Kohler, DDC and Norwich, and further in view of Asar and US Patent No. 3,529,167 to Calhoun (Calhoun).

Regarding claim 16, AAPA in view of Kohler, DDC and Norwich disclose ***a transport mechanism for moving at least one optical disk package along a longitudinal axis*** (AAPA, page 3, lines 1-18, conveyor mechanism for transporting optical discs).

AAPA in view of Kohler, DDC and Norwich does not appear to explicitly disclose ***a first sensor for identifying the arrival of an optical disk package at a test location along the longitudinal axis***. Asar discloses the use of an optical sensor (Asar, Fig. 5 and col. 13, lines 40-65, optical sensor 164) to identify the arrival of an item to be inspected at a test location along a longitudinal axis. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify AAPA in view of Kohler, DDC and Norwich to include a first sensor for identifying the arrival of an optical disk package at a test location along the longitudinal axis in the manner disclosed by Asar for at least the reason that the first sensor output would provide a indication that subsequent processing steps may be commenced (Asar, col. 13, lines 40-65, controller 80 responds based on optical sensor 164 output).

Although AAPA in view of Kohler, DDC and Norwich and Asar disclose optics-based sensor arrangements to provide an indication of the presence of an inlay card in an optical disk package (AAPA, page 2, lines 18-29 and page 3, lines 1-21), the disclosed arrangements do not appear to explicitly disclose ***a second sensor disposed***

about said test location, the second sensor being a light sensitive sensor having an associated light source and wherein the light sensitive sensor is positioned on one side of the transport mechanism and the light source is positioned on an opposing side of the transport mechanism along an axis which is inclined relative to the longitudinal axis, such that the second sensor is disposed to provide an indication of the presence of an inlay card in an optical disk package when the first sensor identifies the arrival of an optical disk package. However, the use of light-based sensors (e.g., solar cells) for defecting defects based on the transmission of light through transparent packaging as claimed is well-known. See, e.g., Calhoun, Fig. 1, light source 12, transparent item to be inspected in the form of a bottle 10 and solar cell 50. It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify AAPA in view of Kohler, DDC, Norwich and Asar to include the sensor-light source arrangement of Calhoun for at least the reason that the light transmission properties of a transparent article are useful for determining whether certain materials are present in the article. Additionally, it would have been obvious to one of ordinary skill in the art at the time the invention was made to configure the combination of AAPA in view of Kohler, DDC and Norwich, Asar and Calhoun such that the light sensor of Calhoun (the claimed "second sensor") provides an indication based on the output of the optical sensor 164, as Asar discloses that the optical sensor 164 may be used to initiate subsequent processing steps.

13. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Kohler, DDC and Norwich, Asar and Calhoun, and further in view of applicant-cited Mediasense JV500 Jewel Box Verification System (Mediasense).

Regarding claim 17, AAPA in view of Kohler, DDC and Norwich, Asar and Calhoun disclose ***a colour/pattern recognition sensor for testing the correct presence of printed matter on a top and/or bottom surface of a package*** (AAPA, page 2, lines 18-29, Mediasense JV500 system). The Mediasense JV500 system includes at least one pattern recognition sensor for testing the correct presence of printed matter on a top and/or bottom surface of a package (Mediasense, page 1, second paragraph). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify AAPA in view of Kohler, DDC and Norwich, Asar and Calhoun to include a pattern recognition sensor as disclosed by Mediasense for at least the reason that this would provide a way to reduce costly returns due to the incorrect assembly of jewel box components (Mediasense, page 1, first paragraph).

14. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Kohler, DDC and Norwich and Asar, and further in view of applicant-cited US Patent No. 5,714,998 to Wheeler (Wheeler).

Regarding claim 18, AAPA in view of Kohler, DDC, Norwich and Asar does not appear to explicitly disclose ***a discard mechanism for the conveyor belt system, the discard mechanism comprising:***

an opening for receiving a package,

an arm movable between a rest position external to the conveyor belt system and an active position, such that when the discard mechanism is activated, the arm is moved from the rest position to the active position displacing one of the at least one packages from one of the belts, thus allowing the package to fall through and be discarded through the opening.

Wheeler discloses a discharge mechanism for a conveyor belt system that includes an opening to receive a package (Wheeler, col. 5, line 60 to col. 6, line 8, an opening is inherent to Wheeler's collector). Wheeler further discloses an arm movable between a rest position external to the conveyor belt system and an active position, such that when the discard mechanism is activated, the arm is moved from the rest position to the active position displacing one of the at least one packages from one of the belts, thus allowing the package to fall through and be discarded through the opening (Wheeler, col. 5, line 60 to col. 6, line 8, cylinder that is actuated to push the defective item laterally off of the conveyor into the collector). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify AAPA in view of Kohler, DDC, Norwich and Asar to include a discard mechanism as disclosed by Wheeler for at least the reason that this would provide a way for removing defective items from the conveyor system subsequent to their inspection.

AAPA in view of Kohler, DDC, Norwich, Asar and Wheeler does not appear to explicitly disclose ***the opening being positioned between the first and second belts***. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to modify AAPA in view of Kohler, DDC,

Norwich, Asar and Wheeler to position the opening between the first and second belts because applicant has not disclosed that the opening being positioned between the first and second belts provides an advantage, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with the inspection system of AAPA in view of Kohler, DDC, Norwich, Asar and Wheeler because the inspection system would provide the same result of discarding packages away from the conveyor belt system responsive to motion of the arm. Therefore, it would have been an obvious matter of design choice to modify AAPA in view of Kohler, DDC, Norwich, Asar and Wheeler to obtain the invention as specified in the claim.

Regarding claim 19, AAPA in view of Kohler, DDC, Norwich, Asar and Wheeler discloses ***wherein the arm is movable along an axis transverse to the longitudinal axis*** (Wheeler, col. 5, line 60 to col. 6, line 8, cylinder that is actuated to push the defective item laterally off of the conveyor into the collector).

Regarding claim 20, AAPA in view of Kohler, DDC, Norwich, Asar and Wheeler discloses ***wherein the rest position is adjacent to an external edge of one of the belts*** (Wheeler, col. 5, line 60 to col. 6, line 8, cylinder that is actuated to push the defective item laterally off of the conveyor into the collector; when the cylinder is not actuated (e.g., in a rest position) the moving portion of the cylinder is retracted into the cylinder, which is mounted on the edge of the conveyor).

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Miller whose telephone number is (571) 270-1964. The examiner can normally be reached on Monday-Thursday, 7:30am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Melissa Koval can be reached on (571) 272-2121. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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DM
Examiner, Art Unit 2858

/MELISSA J KOVAL/
Supervisory Patent Examiner, Art Unit 2858